In re Application of: Yoram REITER et al.
Serial No.: 10/510,229
Filed: October 13, 2004
Office Action Mailing Date: June 18, 2008

Examiner: Zachariah LUCAS
Group Art Unit: 1648
Attorney Docket: 28429

In the Claims:

1-140. (Cancelled)

141. (Currently Amended) A method of killing or damaging a target human cell expressing or displaying a complex composed of a human antigen-presenting molecule and an antigen derived from a pathogen, the method comprising exposing the target cell to a composition-of-matter comprising a soluble ~~n~~ antibody or antibody fragment including an antigen-binding region capable of specifically binding the complex and a domain allowing said antibody or antibody fragment to kill the target cell, wherein the antibody does not bind the human antigen-presenting molecule in an absence of the antigen derived from the pathogen, and wherein the antibody does not bind the antigen derived from the pathogen in an absence of the human antigen-presenting molecule, thereby killing or damaging the target human cell expressing or displaying the complex composed of the human antigen-presenting molecule and the antigen derived from the pathogen.

142. (Previously Presented) The method of claim 141, wherein said domain comprises an antibody constant region or a toxin.

143. (Original) The method of claim 142, wherein said toxin is *Pseudomonas* exotoxin A or a portion thereof.

144. (Original) The method of claim 141, further comprising the step of obtaining the target cell from an individual.

145. (Original) The method of claim 141, wherein said exposing the cell to said composition-of-matter is effected by administering said composition-of-matter to an individual.

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146. (Original) The method of claim 141, wherein the target cell is infected with the pathogen.

147. (Original) The method of claim 141, wherein the target cell is a T-lymphocyte or an antigen presenting cell.

148. (Original) The method of claim 141, wherein said antigen presenting cell is a B cell or a dendritic cell.

149. (Original) The method of claim 141, wherein said antibody fragment is a single chain Fv.

150. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs: 14 (CDR1), 15 (CDR2) and 16 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 17 (CDR1), 18 (CDR2) and 19 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

151. (Previously Presented) The method of claim 141, wherein said binding of said antibody or antibody fragment to said complex is characterized by an affinity having a dissociation constant selected from the range consisting of 1×10^{-2} molar to 5×10^{-16} molar.

152. (Original) The method of claim 141, wherein said human antigen-presenting molecule is a major histocompatibility complex molecule.

153. (Original) The method of claim 152, wherein said major histocompatibility complex molecule is a major histocompatibility complex class I molecule.

154. (Original) The method of claim 153, wherein said major histocompatibility complex class I molecule is an HLA-A2 molecule.

155. (Original) The method of claim 141, wherein said pathogen is a viral pathogen.

156. (Original) The method of claim 155, wherein said viral pathogen is a retrovirus.

157. (Original) The method of claim 156, wherein said retrovirus is human T lymphotropic virus-1.

158. (Original) The method of claim 141, wherein said antigen derived from a pathogen is restricted by the antigen-presenting molecule.

159. (Original) The method of claim 141, wherein said antigen derived from a pathogen is a polypeptide.

160. (Original) The method of claim 159, wherein said polypeptide is a segment of a Tax protein, or a polypeptide having an amino acid sequence as set forth in SEQ ID NO: 3.

161-196. (Cancelled)

197. (Previously Presented) The method of claim 142, wherein said constant region is capable of inducing antibody-dependent cell mediated cytotoxicity (ADCC).

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198. (Previously Presented) The method of claim 142, wherein said constant region is capable of initiating a complement cascade.

199. (Currently Amended) A method of killing or damaging a target human cell expressing or displaying a complex composed of a human antigen-presenting molecule and an antigen derived from a pathogen, the method comprising exposing the target cell to a composition-of-matter comprising an antibody or antibody fragment including an ~~The method of claim 141, wherein said~~ antigen-binding region which includes amino acid sequences as set forth in SEQ ID NOs:20 (CDR1), 21 (CDR2) and 22 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs:23 (CDR1), 24 (CDR2) and 25 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences~~.~~, thereby killing or damaging the target human cell expressing or displaying the complex composed of the human antigen-presenting molecule and the antigen derived from the pathogen.

200. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:26 (CDR1), 27 (CDR2) and 28 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 29 (CDR1), 30 (CDR2) and 31 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

201. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:32 (CDR1), 33 (CDR2) and 34 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 35 (CDR1), 36 (CDR2) and 37 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

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202. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:38 (CDR1), 39 (CDR2) and 40 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 41 (CDR1), 42 (CDR2) and 43 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

203. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:44 (CDR1), 45 (CDR2) and 46 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 47 (CDR1), 48 (CDR2) and 49 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

204. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:50 (CDR1), 51 (CDR2) and 52 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 53 (CDR1), 54 (CDR2) and 55 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

205. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:56 (CDR1), 57 (CDR2) and 58 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 59 (CDR1), 60 (CDR2) and 61 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

206. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:62 (CDR1), 63 (CDR2) and 64 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 65 (CDR1), 66 (CDR2) and 67 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

207. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:68 (CDR1), 69 (CDR2) and 70 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 71 (CDR1), 72 (CDR2) and 73 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

208. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:74 (CDR1), 75 (CDR2) and 76 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 77 (CDR1), 78 (CDR2) and 79 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

209. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:80 (CDR1), 81 (CDR2) and 82 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 83 (CDR1), 84 (CDR2) and 85 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

210. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID

NOs:86 (CDR1), 87 (CDR2) and 88 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 89 (CDR1), 90 (CDR2) and 91 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

211. (Withdrawn-Previously Presented) The method of claim 141, wherein said antigen-binding region includes amino acid sequences as set forth in SEQ ID NOs:92 (CDR1), 93 (CDR2) and 94 (CDR3) in a heavy chain of the antibody, and amino acid sequences as set forth in SEQ ID NOs: 95 (CDR1), 96 (CDR2) and 97 (CDR3) in a light chain of the antibody, said amino acid sequences being in a context of framework sequences.

212. (Previously Presented) The method of claim 141, wherein said pathogen comprises a human virus.

213. (New) The method of claim 141, wherein said antibody is obtainable by screening an antibody library with a single chain human antigen-presenting molecule being refolded with said antigen derived from said pathogen.

214. (New) The method of claim 213, wherein said single chain human antigen-presenting molecule is produced in bacteria.